



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

22191 7590 08/22/2008

GREENBERG TRAURIG, LLP
2101 L Street, N.W.
Suite 1000
Washington, DC 20037

EXAMINER

STARKS, WILBERT L

ART UNIT

PAPER NUMBER

2129

DATE MAILED: 08/22/2008

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/870,946

06/01/2001

David L. Cooper

027716.010500

9475

TITLE OF INVENTION: METHOD AND APPARATUS FOR FRACTAL COMPUTATION

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | NO | \$1440 | \$300 | \$0 | \$1740 | 11/24/2008 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

22191 7590 08/22/2008

GREENBERG TRAURIG, LLP
2101 L Street, N.W.
Suite 1000
Washington, DC 20037

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

| |
|--------------------|
| (Depositor's name) |
| (Signature) |
| (Date) |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/870,946 06/01/2001 David L. Cooper 027716.010500 9475

TITLE OF INVENTION: METHOD AND APPARATUS FOR FRACTAL COMPUTATION

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|-------------|--------------|---------------|---------------------|----------------------|------------------|----------|
|-------------|--------------|---------------|---------------------|----------------------|------------------|----------|

nonprovisional NO \$1440 \$300 \$0 \$1740 11/24/2008

| EXAMINER | ART UNIT | CLASS-SUBCLASS |
|----------|----------|----------------|
|----------|----------|----------------|

STARKS, WILBERT L 2129 706-015000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/870,946

06/01/2001

David L. Cooper

027716.010500

9475

22191

7590

08/22/2008

GREENBERG TRAURIG, LLP

2101 L Street, N.W.

Suite 1000

Washington, DC 20037

EXAMINER

STARKS, WILBERT L

ART UNIT

PAPER NUMBER

2129

DATE MAILED: 08/22/2008

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 687 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 687 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

| | | | |
|-------------------------------|------------------------|---------------------|--|
| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/870,946 | COOPER, DAVID L. | |
| | Examiner | Art Unit | |
| | Wilbert L. Starks, Jr. | 2129 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's filing of 05/29/2008.
2. ☒ The allowed claim(s) is/are 1-91.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|---|--|

DETAILED ACTION

Reasons for Allowance

Claims 1-91 are allowed.

The independent claims 1, 27, 51, 70, and 91 are deemed statutory because the Specification defines the claimed inputs as follows:

[000146] FIG. 24 represents a "smart" scanner, which takes inputs from a scanning device, matches the scanned characters against stored font templates, and adjusts the results based on a subsequent retrieval of dictionary information. As with the searcher design, smart scanners can employ any of the lookup/template levels from the parser architecture to adjust the final estimate of what has been scanned.

[000147] The most sophisticated scanner is represented at FIG. 25, which brings sentence templates to bear before producing an output.

The only inputs for which Applicant has support in the Specification is defined above as a "scanning device." Scanning devices encode data in terms of pixel illumination data. Therefore, under In re Alappat, the claims are deemed to be statutory.

The following is an Examiner's statement of reasons for allowance: Claims 1-91 are considered allowable since when reading the claims in light of the specification, as per MPEP §2111.01, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in independent claim 1, including: a "local minimalization" (as defined at page 8, paragraphs [00019] through [00020] and at page 14, paragraph [00063] and at page 28, paragraph [000138]), a "central processing

Art Unit: 2129

layer" (as defined at page 7, paragraph [00018] and at page 8, paragraph [00019] and at page 10, paragraph [00037] and at page 11, paragraphs [00045] through [00048] and at page 11, paragraph [00053] and at page 12, paragraph [00056] and at page 21, paragraph [00097] and at page 22, paragraph [000102] and at page 33, paragraph [000150]), a "full lateral and feedback connections" (as defined at page 7, paragraph [00018] and at page 8, paragraph [00019] and at page 10, paragraph [00041] and at page 11, paragraph [00051] and at page 20, paragraphs [00094] through [00095] and at page 22, paragraph [000102] and at page 30, paragraph [000143] and at page 32, paragraph [000149] and at page 33, paragraphs [000151] through [000152]), a "re-entrant feedback" (as defined at page 7, paragraph [00018] and at page 8, paragraphs [00018] through [00019] and at page 20, paragraph [00095] and at page 21, paragraphs [00097] through [00098] and at page 22, paragraphs [00099] through [000102] and at page 23, paragraph [000104] and at page 28, paragraph [000138] and at page 29, paragraph [000141]).

Further, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in independent claim 27, including: a "local update" (as defined at page 7, paragraph [00018] and at page 8, paragraph [00019]), a "central processing layer" (as defined at page 7, paragraph [00018] and at page 8, paragraph [00019] and at page 10, paragraph [00037] and at page 11, paragraphs [00045] through [00048] and at page 11, paragraph [00053] and at page 12, paragraph [00056] and at page 21, paragraph [00097] and at page 22, paragraph [000102] and at page 33, paragraph [000150]), a "full lateral and feedback connections"

Art Unit: 2129

(as defined at page 7, paragraph [00018] and at page 8, paragraph [00019] and at page 10, paragraph [00041] and at page 11, paragraph [00051] and at page 20, paragraphs [00094] through [00095] and at page 22, paragraph [000102] and at page 30, paragraph [000143] and at page 32, paragraph [000149] and at page 33, paragraphs [000151] through [000152]), a "re-entrant feedback" (as defined at page 7, paragraph [00018] and at page 8, paragraphs [00018] through [00019] and at page 20, paragraph [00095] and at page 21, paragraphs [00097] through [00098] and at page 22, paragraphs [00099] through [000102] and at page 23, paragraph [000104] and at page 28, paragraph [000138] and at page 29, paragraph [000141]).

Further, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in independent claim 51, including: a "local connection" (as defined at page 7, paragraph [00018] and at page 8, paragraph [00019]), a "fractal percolation" (as defined at page 6, paragraphs [00011] through [00015] and at page 7, paragraphs [00015] through [00016] and at page 8, paragraph [00020] and at page 9, paragraph [00025] and at page 9, paragraph [00030] and at page 12, paragraphs [00055] through [00057] and at page 14, paragraphs [00064] through [00065] and at page 15, paragraph [00067] and at page 16, paragraph [00078] and at page 17, paragraphs [00079] through [00081] and at page 18, paragraph [00088] and at page 19, paragraph [00091] and at page 20, paragraph [00092] and at page 22, paragraph [000103] and at page 23, paragraph [000103] and at page 24, paragraph [000109] and at page 25, paragraph [000124] and at page 26, paragraph [000125] and at page 27, paragraph [000136] and at page 28, paragraphs [000138] through

Art Unit: 2129

[000139]), a "minimalization" (as defined at page 8, paragraphs [00019] through [00020] and at page 14, paragraph [00063] and at page 28, paragraph [000138]).

Further, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in independent claim 70, including: a "local connection" (as defined at page 7, paragraph [00018] and at page 8, paragraph [00019]), a "fractal percolation" (as defined at page 6, paragraphs [00011] through [00015] and at page 7, paragraphs [00015] through [00016] and at page 8, paragraph [00020] and at page 9, paragraph [00025] and at page 9, paragraph [00030] and at page 12, paragraphs [00055] through [00057] and at page 14, paragraphs [00064] through [00065] and at page 15, paragraph [00067] and at page 16, paragraph [00078] and at page 17, paragraphs [00079] through [00081] and at page 18, paragraph [00088] and at page 19, paragraph [00091] and at page 20, paragraph [00092] and at page 22, paragraph [000103] and at page 23, paragraph [000103] and at page 24, paragraph [000109] and at page 25, paragraph [000124] and at page 26, paragraph [000125] and at page 27, paragraph [000136] and at page 28, paragraphs [000138] through [000139]), a "minimalization" (as defined at page 8, paragraphs [00019] through [00020] and at page 14, paragraph [00063] and at page 28, paragraph [000138]).

Further, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in independent claim 91, including: a "full lateral and feedback connections" (as defined at page 7, paragraph [00018] and at page 8, paragraph [00019] and at page 10, paragraph [00041] and at page 11, paragraph [00051] and at page 20, paragraphs [00094] through [00095] and at page 22,

Art Unit: 2129

paragraph [000102] and at page 30, paragraph [000143] and at page 32, paragraph [000149] and at page 33, paragraphs [000151] through [000152]), a "local update" (as defined at page 7, paragraph [00018] and at page 8, paragraph [00019]), a "re-entrant feedback" (as defined at page 7, paragraph [00018] and at page 8, paragraphs [00018] through [00019] and at page 20, paragraph [00095] and at page 21, paragraphs [00097] through [00098] and at page 22, paragraphs [00099] through [000102] and at page 23, paragraph [000104] and at page 28, paragraph [000138] and at page 29, paragraph [000141]).

Only to the extent that these features are not found in the prior art of record is the present case allowable over the prior art.

Conclusion

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Wilbert L. Starks, Jr. whose telephone number is (571) 272-3691.

Alternatively, inquiries may be directed to the following:

Application/Control Number: 09/870,946

Page 7

Art Unit: 2129

S. P. E. David Vincent (571) 272-3080

Official (FAX) (571) 273-8300

/Wilbert L. Starks, Jr./

Primary Examiner, Art Unit 2129

WLS

18 AUG 2008